

Application No. 10/501,774
Attorney Docket No.: 042593
Amendment Filed: June 13, 2007

REMARKS

Claims 1, 2, 4-7, 9-12 and 14-20 are pending in the present application.

Claim Rejections - 35 U.S.C. §§ 102 and 103

Claims 1, 4, 6, 9, 11, 12, 14-18 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by **Oka** (U.S. Patent 6,366,175); claims 2 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Oka** in view of **Gillig** (U.S. Patent 5,856,766); claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Oka** in view of **Cole** (of U.S. Patent 5,994,970); claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Oka** in view of **Wojewoda** (U.S. Patent 5,731,742); claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Oka** in view of **Shibuya** (U.S. Patent 6,292,066); and claim 19 was rejected under U.S.C. § 103(a) as being unpatentable over **Oka**.

Favorable reconsideration is requested.

Oka discloses a temperature compensated oscillator. The oscillator includes an oscillation circuit 29 and a temperature compensation circuit 21 which outputs a compensation voltage V_{C1} to a variable capacitance element C_V for compensating for temperature changes. The oscillation circuit 29 includes a resonator such as a quartz crystal resonator and the variable capacitance element C_V . The oscillator has a power control circuit 26 for controlling power supply to the temperature compensation circuit 21 and the oscillation circuit 29.

Applicant respectfully submits that Oka does not disclose:

 said selection means has a selection circuit ... for fixing the capacitance value of said oscillation capacitor to a predetermined constant capacitance

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value independent of the temperature when disabling said temperature compensation function

as recited in claim 1.

Oka discloses a track and hold circuit 22 for switching in and out of a track mode and a hold mode. Oka discloses that the power control circuit 26 sets the mode control signal for the track and hold circuit. (Col. 14, lines 16-22.) In the track mode, the output voltage from the temperature compensation circuit 21 is also outputted by the track and hold circuit. In the hold mode, the output voltage of the track and hold circuit is maintained at the level of the input from the temperature compensation circuit 21 at the time of mode switch. (Col. 14, lines 16-22.) In other words, the output voltage is maintained at the level just before switching off the temperature compensation circuit.

Since the output voltage is maintained at the level just before switching off the temperature compensation circuit, the capacitance value of variable capacitance element Cv is maintained at the level just before switching off the temperature compensation. This means that the capacitance value is dependent on the temperature at the time the temperature compensation is turned off. Therefore, the capacitance value of the variable capacitance element Cv is not fixed to a *predetermined* constant capacitance *independent of the temperature* when temperature compensation is switched off.

The Office Action takes the position that power control circuit 26 corresponds with the selection circuit as recited in claim 1. (Office Action, page 3.) The Office Action incorrectly states that the temperature compensation is disabled when SW1 is set to Off. (Office Action,

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page 4.) When SW1 is set to Off, Vc1 passes through filter circuit 23 for filtering out noise. (Col. 17, lines 4-6; Fig. 9.) The temperature compensation circuit is controlled by the power control circuit 26. (Col. 16, lines 24-29; col. 17, lines 12-17.) As stated above, when the temperature compensation circuit is turned off, the track and hold circuit maintains an output voltage corresponding to the last voltage from the temperature compensation circuit just before turning off. (Col. 14, lines 16-22.) Thus, Oka does not disclose fixing the variable capacitance element Cv to a predetermined constant capacitance independent of the temperature when temperature compensation is switched off. Therefore Oka does not disclose the elements as recited in claim 1.

Regarding claim 2, the Office Action acknowledges that Oka does not disclose a variable frequency division circuit between the oscillation circuit and the output line, and that the selection means varies the frequency division ratio when enabling temperature compensation and fixing the frequency division ratio to a predetermined value when disabling temperature compensation.

The Office Action cites Gillig for disclosing this feature. Gillig discloses a communication device comprising a frequency synthesizer 24 driven with a reference frequency from a crystal oscillator 58. The frequency synthesizer is disclosed as including a frequency multiplication element 48 which is programmed to vary as a function of a temperature variation of the output frequency of the crystal oscillator.

Applicant respectfully submits that neither Oka nor Gillig teach or suggest:

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wherein said selection means has means for ... fixing the frequency division ratio of said variable frequency division circuit to a predetermined value when disabling the temperature compensation function

as recited in claim 2.

The Office Action takes the position that this limitation reads on Gillig when the temperature is very close to room temperature, and thus no compensation is needed. (Office Action, page 5.) However, the fact that no compensation is needed is not the same as disabling temperature compensation and setting the variable frequency division circuit to a predetermined value.

When no temperature compensation is needed in Gillig, the variable frequency division circuit outputs a signal based on a calculated value such that the frequency of the output signal is not adjusted. Thus, temperature compensation is not disabled even when no temperature compensation is needed. Furthermore, when no temperature compensation is needed, the value of the frequency division ratio is still calculated to the proper value such that no adjustment is made. Thus, the frequency division ratio is not set to a predetermined value even if no temperature compensation is needed. Therefore, Oka in view of Gillig does not teach or suggest the elements as recited in claim 2.

For at least the foregoing reasons, claims 1 and 2 are patentable over the cited references, and claims 4-7, 9-12 and 14-20 are patentable by virtue of their dependence from claim 1 or 2. Accordingly, withdrawal of the rejection of claims 1, 2, 4-7, 9-12 and 14-20 is hereby solicited.

In view of the above remarks, Applicant submits that that the claims are in condition for allowance. Applicant requests such action at an early date.

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If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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